

Division: Public Works

Department: Infrastructure Planning and Geo-Resources

Program: 30TP

#### TRAFFIC IMPACT ANALYSIS

### 1.0 Background

A Traffic Impact Analysis (TIA) assesses how a proposed development affects the transportation network and recommends how to mitigate the impacts of additional traffic. The solutions proposed address motorized and non-motorized transportation modes. While there are common TIA characteristics, the studies vary in complexity depending on the type, size, and location of the development.

The responsibility of Bernalillo County Public Works Division (BCPWD) is to protect the public interest by ensuring that development impacts on transportation system performance are understood and addressed. Bernalillo County Code states that a TIA may be required for residential, commercial and industrial developments within the County. Under the Bernalillo County Code, a TIA may be required for subdivisions with 25 or more parcels, and apartments or mobile home parks with 25 or more dwelling units. The County Code states that non-residential design will be based on traffic generation. A TIA is considered for all commercial and industrial developments independent of size of the proposed operation if the development abuts or accesses a county or state maintained road and existing or future trail within Bernalillo County. Public Works classifies public facilities such as schools, parks, government offices, police and fire stations, and community centers as non-residential facilities. Whether the proposed development is residential or non-residential, a TIA is reviewed and may be required to provide safe and efficient driveway access, and to ensure pedestrian, bicycle as well as vehicle safety. It is the County Code that establishes the thresholds for conducting a study, the concern for safety, and multimodal traffic analyses.

When considering whether or not a proposed development requires a TIA, the minimum trip generation threshold reviewed is 250 trips on a weekday or 25 trips in the PM peak hour. These thresholds support but do not determine whether or not a TIA is required. A TIA may be required either on the basis of vehicle characteristics such as axle loads and turning radii, or roadway characteristics such as safety and level of service of road segments and intersections. In review of TIA requirements, consistent with the intent of the County Code, the primary concern is public safety.

<sup>&</sup>lt;sup>1</sup> Bernalillo County Code Chapter 74, Section 74-103 Transportation

<sup>&</sup>lt;sup>2</sup> Bernalillo County Code Chapter 66, Section 66-222 Curb Cut Requirements

<sup>&</sup>lt;sup>3</sup> Bernalillo County Code Chapter 66, Section 66-213 Intent and Purpose

<sup>&</sup>lt;sup>4</sup> Consistent with the County Code notation of a TIA based on trips generated by number of residential units, the residential land use with the highest average trip generation rate (Single Family Dwelling Unit, land use 210) was the basis for the review threshold.

A developer may recommend that a proposed development should be exempt from preparing a TIA. The recommendation must be technically based on trip generation and safety concerns. The recommendation must be in writing so there is formal documentation of the request. There will be a written response to the recommendation so there is a clear record of the technical foundation of the recommendation and response. This ensures that the TIA requirements are consistently and equitably applied. BCPWD will respond in writing whether or not a TIA is required and the basis for the decision. If BCPWD concurs that a TIA is not required, this action does not in any way constrain the New Mexico Department of Transportation (NM DOT). NM DOT may require a traffic study even though BCPWD does not. A Scoping Report is the required first step for all non-residential development, whether or not a TIA will be prepared.

#### 2.0 Stakeholder Involvement

Bernalillo County is committed to serving the public interest through benchmarking and improving upon nationally recognized practices. Bernalillo County is committed to continuous quality improvement. Our TIA "stakeholders" are the individuals and organizations impacted by TIA procedures and the final product. Our stakeholders include developers and their representatives, governmental agencies, non-governmental organizations, and interested residents.

We are interested in learning from our stakeholders. Each year BCPWD invites stakeholders to review and comment on our TIA procedures. Innovative approaches are encouraged that contribute to and advance current practices in Bernalillo County, the Mid-Region of New Mexico and our Nation.

#### 3.0 Introductory Material

Bernalillo County Public Works Division has prepared a "Citizen's Guide to Traffic Impact Analysis". The Guide provides an introduction to traffic studies for all interested persons. Use the contact information at the end of this document if you would like an electronic or print copy.

## 4.0 Scoping Report

The first step in a TIA is for the developer or developer's representative to prepare a Scoping Report. Staff from Parks and Recreation may also be invited if bicycle and pedestrian facilities are potentially part of the scope. The Scoping Report will include a site plan, quantitative description of the proposed development and land use along with relevant mapping. Scoping Report topics should include, but are not limited to, the following:

If no TIA is anticipated, the information may be submitted in the form of a letter and include:

- Proposed action and KIVA<sup>5</sup> number (building permit, zoning change, special use permit, conditional use permit, subdivision, etc.)
- Proposed land use;
- Proposed roadway access;

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<sup>&</sup>lt;sup>5</sup> KIVA is the County's on-line permit tracking system.

- Proposed on-site vehicular and pedestrian-bicycle circulation and parking;
- Hours and days of operation;
- Trip generation for average weekday and peak hour traffic (must include all customers, employees, deliveries, etc.)
- Truck traffic;
- Consistency with area and regional plans for all modes of transportation.

## *If a TIA is anticipated:*

- The information listed above plus the following
- Proposed development phasing;
- Proposed development completion date(s) and study horizon year(s);
- TIA study area;
- Previously conducted and relevant TIAs and recommendations;
- Financially guaranteed improvements from other approved developments;
- Data proposed for use in the analysis, including study period by proposed land use, age of previously collected data, and growth rates;
- Anticipated tools proposed for the conduct of the TIA<sup>6</sup>;
- Anticipated traffic monitoring and/or field data collection;
- Traffic forecast method and traffic dataset;
- Safety analysis;
- Initial assessment of development impact on other modes of transportation, including pedestrian, bicycle and transit; and

The proposed land use will affect subsequent bullets. For example, one of the following bullets is anticipated traffic monitoring and/or field data collection. The traffic monitoring period of interest for most land uses, public and private, is directly related to the traffic on the adjacent roadway. However, some land uses have trip generation characteristics that are related to the generator rather than the adjacent street traffic. When this occurs, the traffic monitoring period may change. An alternative methodology to ITE's trip generation rates may be proposed in the Scoping Report such as in cases of small building footprints or land uses not listed in the ITE Handbook.

Each land use will be evaluated to determine the appropriate periods to be evaluated in the study. In this evaluation, the first concern is safety and the second concern is operational impact on the street network. The Scoping Report should begin with the proposed land use or uses and then use the land use to inform the following topics in the Scoping Report.

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<sup>&</sup>lt;sup>6</sup> BCPWD recommends the most current versions of the *Highway Capacity Manual* (HCM), Transportation Research Board, with computer software conforming to the HCM; *Trip Generation* and *Trip Generation Handbook*, Institute of Transportation Engineers; *A Guide for Reducing Collisions Involving Bicycles*, National Cooperative Highway Research Program, Report 500; and, *A Policy on Geometric Design of Highways and Streets*, American Association of State Highway and Transportation Officials. Exceptions to these resources must be proposed in the Scoping Report and approved by BCPWD prior to use in the analysis.

A scoping meeting is scheduled with the developer or developer's representative after the Scoping Report has been submitted to and reviewed by BCPWD. Staff will assign a Public Works Traffic Study Review (PWTR) number to the report so the case can be tracked in KIVA.

## **5.0** Scoping Meeting

The developer or developer's representative will meet with BCPWD staff and discuss the Scoping Report for the conduct of a TIA. Each proposed development has both common and unique features. These features will be discussed during the meeting.

BCPWD staff will clarify the scope and may recommend changes during the meeting. Subsequent to the meeting, the final Scoping Report will be submitted to BCPWD for approval. Approval will be provided in writing. Staff will determine, based on the Scoping Report, if the proposed development will generate sufficient traffic to impact County roadways and if there are any safety issues associated with the development. Staff will notify the applicant if they must continue with the preparation of a TIA.

When the Scoping Report is approved by BCPWD, a draft TIA based on the approved scope is prepared by the developer or the developer's representative. The draft TIA should include the approved Scoping Report.

In addition to meeting with representatives of Bernalillo County, the developer is required to meet with the NM DOT when a state route within the county limits is involved. When multiple governmental agencies are impacted by a proposed development, Bernalillo County recommends the developer convene a meeting in which all agencies are invited to participate.

# **6.0 Draft Traffic Impact Analysis**

Based on the approved Scoping Report, unless directed otherwise by BCPWD, a licensed traffic engineer will prepare a draft TIA for review and comment by BCPWD and consistent with the Bernalillo County Code, will submit three copies of the draft and all subsequent TIA documents.

# 6.1 General Approach

Traffic conditions associated with a "no build" option will be depicted in the Draft TIA. This option will represent the "baseline" traffic condition. One or more "build" scenarios will be presented in the Draft TIA to portray traffic conditions that would result from the proposed development.

The no build and build scenarios may involve future time frames, commonly called "horizon years". In the scoping study, the developer will propose the horizon years. Typically, horizon years are based on development plans. During the scoping meeting, BCPWD may require changes and additions to the proposed horizon years.

The Metropolitan Transportation Plan (MTP) for the Mid-Region of New Mexico includes roadway, bicycle, pedestrian, and transit improvements for future years, reflecting fiscally

constrained and policy approved investment in infrastructure. Policy approved investment may include privately funded transportation improvements. The horizon year(s) baseline or no build condition shall include these improvements and no others as part of the no build option.

For Bernalillo County, the Metropolitan Planning Organization (MPO) is the Mid-Region Council of Governments (MRCOG) which is responsible for developing the regional socioeconomic and regional travel demand forecasts for the Albuquerque Metropolitan Planning Area (AMPA). The authorized travel demand package is the current package identified by MRCOG. Approved MRCOG datasets from the current MTP should be the basis for all baseline network and socioeconomic assumptions and inputs. These MTP Scenario input datasets and model databanks are made available to the public and every member agency of the MRCOG.

Some large-scale developments have a regional traffic impact. The developer or developer's representative may propose to model regional traffic and present the results in the draft TIA. If the scope of the TIA is of a scale such that it requires significant Traffic Analysis Zone and/or network modification of the approved MTP datasets and necessitating additional use of the MRCOG's Regional Travel Demand Model, a special request from the County to the MRCOG must be coordinated in consideration of current tasks identified in the MRCOG's current Unified Planning Work Program. Regional traffic modeling results conducted without the direct involvement of the MRCOG and BCPWD are not acceptable either for inclusion in a scoping study or for submittal in a draft TIA. For modeling results to be acceptable, at a minimum MRCOG and BCPWD must be involved in defining the model assumptions as well as assessing and approving model results.

Using traffic procedures and tools approved in the scoping study, the draft TIA shall evaluate transportation levels of service (LOS) and other measures of effectiveness for the build scenario(s). Additional traffic analysis based on site study area characteristics include queuing analysis, speed-change lane requirements, vehicle mix (percent heavy vehicles [%HV], passenger car equivalents [PCE]), gap studies, traffic signal warrants, traffic signal progression, sight distance, and pedestrian/bicycle safety analysis. The draft TIA shall identify road segment and intersection deficiencies resulting from the proposed development and shall recommend an itemized program of specific improvements to correct the deficiencies caused by the proposed development. The draft TIA should identify locations where improvements may require additional right of way.

Pedestrian activity – signalized intersection(s) evaluations must show green time splits that include adequate pedestrian crossing times. When traffic signal timing is optimized for mainline traffic flow and side street volumes are low, this can become problematic. The study shall include adequate pedestrian crossing green time for all through movement split calculations.

Truck traffic – A description and analysis of internal traffic circulation including heavy vehicles should be included in the traffic report. For large commercial industrial developments, the TIA will include an analysis of internal traffic circulation and heavy vehicle route assignments to/from their origins. The origin destination modeling should adhere to established movement hierarchy lines of travel avoiding local roads that serve residential areas.

To reduce conflicts at access points, right-turn and left-turn speed change lanes may be required. Access point characteristics, site generated traffic, proximity to major/minor intersections and other driveways, and the posted speed limit of adjacent roadways will be used to determine when speed change lane warrant analyses are required. Bernalillo County utilizes the criteria for determining when speed change lanes are required contained in the current *New Mexico Department of Transportation, State Access Management Manual.* 

# 6.2 Study Area

The extent of the draft TIA study area is defined by the impact of the proposed development on current and horizon year roadway operations. The study area is in two parts - the intersection and travelshed analysis areas. The developer or developer's representative will propose the study area, for both intersections and the travelshed, in the scoping study. The approved study area is implemented in the Draft TIA.

The intersection analysis area is the area within which signalized and unsignalized intersections shall be analyzed for each particular study. The area will vary based upon the proposed land use, intensity, and the location and the existing operation of the surrounding intersections. The minimum intersection analysis area requirement is site access and adjacent intersections, plus the first major intersection in each direction from the site.

The travelshed, sometimes called the market area, is the geographic area that is identified for the proposed development trip origins and destinations. The passenger car travelshed is used for the purpose of setting the limits of the study area for a proposed development. This may range from a 2-mile radius for a small retail establishment, to as large as the regional traffic modeling area for major residential, commercial or industrial developments. The travelshed of the development shall be recommended in the scoping study and may be revised during the scoping meeting.

The study area for pedestrian and bicycle facilities may be determined in a number of ways such as a time contour distance from the development site or by a comfortable walking or bicycling distance to surrounding neighborhoods.

## 6.3 Traffic Data

Traffic counts of motorized and non-motorized vehicles and pedestrians may be recommended by the developer or required by BCPWD. Traffic volume, classification, and speed data may be counted for one or more road segments; and, turning movements may be counted at one or more intersections. Other traffic data, such as heavy commercial vehicle Gross Vehicle Weight and axle load distribution, may be specified by BCPWD along with reporting requirements. Special counts may be recommended or required such as queue, delay, or gap studies. If special counts are indicated, data collection techniques will be determined by the County and the developer or the developer's representative.

MRCOG is a primary source of traffic monitoring data in the region. MRCOG reports standard and non-standard traffic summary statistics in their Annual Traffic Flow Maps. Only standard-based traffic summary statistics should be included in a report submitted to Bernalillo County

Public Works Division. In addition, traffic trends on a roadway should be based on standard count-based data, not a combination of factored and unfactored data.

In addition, Bernalillo County conducts short-term traffic counts of vehicle volume, classification, intersection turning movements, and speed on some County road segments. These count data are available upon request. While it is often helpful to review and use historical traffic data, it is required that the most recent data used in a TIA be collected no more than three years prior to the submittal of the document. If required traffic data for the proposed development have not been collected within the past three years, a traffic count must be conducted by the developer, noted in the Scoping Report, incorporated into the Draft and Final TIA, and be submitted to Bernalillo County Public Works Division in electronic format.

BCPWD is developing a website that will consolidate traffic monitoring counts whether collected by the private or public sector. All traffic data collected for TIAs must follow the electronic data submittal requirements in these guidelines to ensure the data are comparable and the results accessible through the website. Public agencies and the private sector will have access to the accepted data.

Traffic data for a TIA must be collected on Tuesday through Thursday so the data represent typical weekday traffic. If the proposed development has trip generation characteristics that recommend traffic monitoring on other days of the week, monitoring on alternative days of the week should be proposed in the Scoping Report and approved by Bernalillo County prior to the data being collected and analyzed.

The technology of traffic monitoring devices is constantly advancing. In order to provide flexibility for the changing technology, traffic counts must be submitted in electronic format to Bernalillo County. The counts should be submitted as plain text (ASCII) comma delimited file generated directly from the Automatic Traffic Recorder (ATR) or ATR software. The file header should include the Latitude and Longitude of the count. The Latitude and Longitude should be in decimal degrees format. In addition to the Latitude and Longitude, the header information should include the route name and location on the route (e.g. Barcelona Rd, East of Coors Blvd). Documentation of the header format should be included with the submittal. Electronic traffic data should be accompanied by a map (road segment or intersection) showing the location of the count and the volumes.

### 6.3.1 Electronic Submittal of Traffic Data

# 6.3.1.1 Road Segment Traffic Data

All counts will have a data summarization period of 15 minutes. There will be a minimum of 48 consecutive hours of data collected by direction reported from each road segment data collection site. This standard will apply for volume, classification, speed and weight.

The file must have a header section (the first few records of the file) followed by the traffic volume data. The file header must include the location and facility description information indicated below.

- 1. The header record must include a flag to indicate if the count is one or two way.
- 2. The header record must include the latitude and longitude of the count in decimal degrees reported to the third decimal place.
- 3. The header record must include a machine identification number.
- 4. The header record must include the start/end dates and the start/end times.
- 5. The header record must include a directional indicator that matches to the data records.
- 6. The header record must include a location description (such as Barcelona Rd East of Coors Blvd).

Additionally, the Automatic Traffic Recorder used to collect the road segment data must be configured to collect the traffic data in the following manner:

- 1. The data must be collected directionally.
- 2. The data must be collected in 15 minute intervals.
- 3. The data must be collected for a minimum of consecutive 48 hours (192 consecutive 15 minute periods), Tuesday through Thursday.

Day 1 and Day 2 counts will be compared by BCPWD to insure consistency of data. If there are inconsistencies (due to either machine malfunction or abnormal traffic patterns), a recount of the location may be required.

# 6.3.1.2 Electronic file of complete TIA

After the review and approval process, the final TIA will be converted to pdf format and submitted with the required number of final hard copies of the document. The pdf file will be made available on Bernalillo County's website for public information. The pdf file can be delivered on a readable CD or transmitted via other means with approval from Bernalillo County Staff

## 6.3.1.3 Intersection Turning Movement Data

Intersection turning movement data must be collected consistent with the Bernalillo County Public Works standard practice, or the ASTM standard practice developed with the involvement of state transportation agencies and under the guidance of the Federal Highway Administration.<sup>7</sup> Turning movement count data will include the 15-minute volume of each movement by approach lane. Intersection turning movements should minimally report passenger cars, trucks, bicycles and pedestrians. Intersection turning movement counts without bicycle and pedestrian information will not be accepted.

The period of intersection turning movement counts will follow one of two procedures consistent with state traffic monitoring standards.

### 1) Fixed Intersection Count Period

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<sup>&</sup>lt;sup>7</sup> Standard Practice for Acquiring Intersection Vehicle Turning Movement Data, ASTM, E17.52, WK20203

Manual intersection turning movement counts will be conducted from 07:00 to 10:00, 11:00 to 14:00, and 15:00 to 18:00 hours. This provides monitoring of three daily peak traffic periods during the same weekday, each of three-hour duration, for a total of nine hours of data collection.

Bernalillo County will use the first data collection period to help identify traffic during the AM Peak. Bernalillo County will use the second data collection period to help identify traffic congestion and access issues during mid-day, and to assess trips other than those between home and work. Data about other trips other than home and work are useful in the transition from traffic studies serving only personal vehicle and roadway needs to understand other motorized and non-motorized transportation options. Bernalillo County will use the third data collection period to help identify traffic during the PM Peak.

## 2) Flexible Intersection Count Period

Intersection turning movement counts may be conducted based on observed peak traffic conditions from a standard 48-hour road segment traffic volume count conducted on the high volume leg of the intersection. Traffic counts on the high volume approach on an intersection must have been conducted in the same seasonal adjustment period and within three years of the analysis. Typical morning, noon, and evening peak hours will each be defined using fifteen-minute intervals. At a minimum, one half hour before and one half hour after each anticipated peak hour will be defined. This will result in three traffic-monitoring periods within a weekday, each of a minimum of two hours duration, for a total of six hours of data collection.

## 3) Changes to the Data Collection Period

The proposed development may have trip generation characteristics that are not included in the two stated count periods. In this circumstance, the traffic data collection period may be extended.

In the Scoping Report, the developer may recommend a change in or reduction to the data collection period. The reduction should be based on the specific land use and proposed site. It should be anticipated, however, that intersection turning movement traffic counts will be a minimum of six hours and in all circumstances the data must be collected and reported consistent with standard practice.

# 6.3.2 Truth In Data

Traffic data collection, editing, summarization and reporting practice will be consistent with the Principle of Truth in Data. Divergence from standard practice must be disclosed. Data may not be estimated, interpolated or by any means manipulated and reported as traffic measurements.

Additional traffic data or data format requirements may be identified by BCPWD during the scoping meeting. Traffic data collection should follow scoping study approval. Traffic summary statistics together with base data must be submitted for evaluation.

#### 6.3.3 Data Use

If accepted, the traffic data will be entered into the Bernalillo County traffic database and used in the traffic analysis and for other purposes. Standard data are used for purposes such as the accident exposure rate, which is calculated by dividing the number of accidents by the traffic volume over the same period. Ensuring data quality is a public trust whether the data are used for traffic operations or safety. There is, therefore, rigorous quality assessment of the traffic data collected for and submitted as part of a TIA.

In addition to quality control, there is also a cost savings by requiring traffic data be submitted electronically, be checked, and when accepted entered into a database for ongoing use. By using the same data for traffic impact studies and other applications such as safety analyses, the overall cost of collecting traffic data is reduced. Savings, too, is in the public interest.

### 6.4 Content Organization

The draft TIA should use the following outline to organize the study content. Some points in the outline will not be applicable to all proposed developments. For example, not all developments have phases of development. The developer or the developer's representative will either use the following draft TIA outline for all applicable points or propose an alternative outline in the scoping study.

# 6.4.1 Draft TIA Outline

- 1. Introduction and summary
  - a. Purpose and objectives
  - b. Site location and study area
  - c. Brief description of the development
  - d. Approved Scope
  - e. Conduct of the study
    - (1) Assumptions used in the study
    - (2) Resources used in the study
    - (3) Traffic monitoring or other field data collected for the study
  - f. Principal findings and/or conclusion(s)
  - g. Recommendations proposed as part of the development for on-site and off-site improvements

# 2. Proposed development

- a. Land use and intensity
- b. Location
- c. Site plan
- d. Phasing and timing

#### 3. Area conditions

- a. Off-site study area
  - (1) Area of influence
  - (2) Area of traffic impact
  - (3) Current and planned development
- b. Under construction
- c. Infill development
- d. On-site study area
  - (1) Area of influence
  - (2) Current phase of development
- e. Site access
  - (1) Existing and proposed road system
  - (2) Existing and proposed trail system
  - (3) Existing and proposed sidewalks
  - (4) Existing and proposed bike lanes and bike routes
  - (5) Bus stops
  - (6) Improvements to accommodate site traffic
  - (7) Improvement alternatives

## 4. Projected Traffic

- a. Growth rate
- b. Site motorized vehicle traffic (by horizon year, phase and land use)
  - (1) Trip generation
    - (a) Rate or equation
    - (b) Independent variables
    - (c) Time period
    - (d) Daily and seasonal variables
    - (e) Internal capture, diverted and pass-by trips
- c. Site non-motorized vehicle and pedestrian traffic (by horizon year, phase and land use)<sup>8</sup>
- d. Off-site traffic (by horizon year)
  - (1) Trip distribution and assignment consistent with the regional transportation model<sup>9</sup>
  - (2) Off-site traffic for planned development
- e. Total estimate off-site traffic (each horizon year)

## 5. Traffic analysis

- a. Site access
  - (1) Capacity and Level of Service
  - (2) Traffic control
  - (3) Sight distance

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<sup>&</sup>lt;sup>8</sup> The presence of bicycle traffic, as a primary example of non-motorized vehicle traffic, is not the sole way in which a proposed development should address need for bicycle service as part of a traffic analysis. The Final TIA must address the ways in which the proposed development can support current regional plans for non-motorized transportation. This assessment should be based on need and opportunity as well as presence identified during traffic monitoring.

<sup>&</sup>lt;sup>9</sup> Alternative approaches may be used if consistent with the recommended practice identified in the most current edition of *Transportation Impact Analyses for Site Development*, Institute of Transportation Engineers; Washington, D.C.

- (4) Signal warrant analysis
- (5) Turn lane warrants
- b. Off-site roadways and intersections (build and no-build)
- c. Site circulation
  - (1) County road standards
  - (2) Parking
  - (3) Large vehicle uses
  - (4) Pedestrian, equestrian, and/or bicycle uses

## 6. Improvement analysis

- a. Improvements to accommodate base traffic (no build)
- b. Improvements to accommodate site traffic (build)
- c. Improvement alternatives
  - (1) Safety a description of safety impacts and alternatives is required for all land uses.
  - (2) For public, charter, and private school and school-related land uses:
    - Count data should include actual or estimates of school peak hours
    - Describe the safety of pedestrian and bicycle routes to school including crosswalks within the school's walk zone<sup>10</sup>.
    - The school agency shall provide a site location at the time of the initial coordination meeting so that it can be reviewed for compatibility with the adjacent roadway system. The site circulation plan shall show driveway access, parking for employees, parents, students, and visitors, separate parent and school bus drop-off and loading, ADA facilities, pedestrian crosswalks, walkways, and bicycle facilities. Describe the safety of parent/bus drop-off and student/staff parking. Identify on-site pedestrian-bicycle circulation.
    - Reference the draft MRCOG School Traffic Study Procedures dated September 19, 2010 for additional information on school related land uses.
  - (3) For industrial uses involving heavy trucks, a structural pavement analysis must be performed to determine if County roadways affected by trips to and from the site can support truck traffic. The scope of the pavement analysis will vary depending on truck loading factors, location of the development, and other items pertaining to the particular development. The analysis will provide information on the pavement structural capacity of the in-situ county maintained roadways affected by site generated traffic.

#### 7. Findings

- a. Site accessibility
- b. Traffic impacts
- c. Need for any improvements
- d. Compliance with application local, state and national standards

#### 8. Recommendations

- a. Site access and circulation plan
- b. Off-site improvements and mitigation measures

 $<sup>^{10}</sup>$  APS walk zones are defined as 1 mile radius for elementary school, 1.5 miles for middle school, and 2 miles for high school students.

# 6.5 Review and Comment

BCPWD has adopted a target of ten working days for initial review and comment on a draft TIA. Comments will be provided in writing to the developer or developer's representative. BCPWD comments will identify concerns that must be addressed and technical corrections that are recommended to improve the document. BCPWD may require the draft TIA be resubmitted or may state that after revising the draft document the final TIA may be submitted. The County, the developer or the developer's representative may request a meeting to discuss the comments. Discussions and ultimate approval are dependent on the level of initial comments, additional analysis requested, and scope of improvements to be considered to mitigate any negative impacts to the local transportation network. Bernalillo County will work with the developer and developer's representative to complete these discussions within one month of submittal of the draft TIA.

## 7.0 Final Traffic Impact Analysis

When notified by BCPWD, a developer or developer's representative may submit three copies of the final TIA with the changes directed along with the electronic versions of the report described in Sections 6.3.1.1 and 6.3.1.2. BCPWD can provide support in scanning documents. The developer may be requested to deliver a presentation of findings to County staff. The final document is not considered approved until stated in writing by BCPWD. Final TIA approval will be provided by BCPWD in writing to the developer.

# 8.0 Changes to the Final Traffic Impact Analysis

### 8.1 Traffic Impact Analysis Re-submittal

Some developments change the site plan, site access, and land uses after the Final TIA has been approved. In this case, the Final TIA approval for the proposed development is withdrawn and the Final TIA must be resubmitted. Re-submittal of the Final TIA must include all changes to the site plan and calculation of their impact on traffic safety and operations. The resubmitted document is subject to the same review and approval process as the previously submitted Final TIA.

## 8.2 Traffic Impact Analysis Update

Some developments are completed long after a Final TIA is approved. A Final TIA is in effect for three years from the approval date. After three years, an update of the TIA must be filed and approved. The update is subject to the same review process as a new TIA. The developer or developer's representative will prepare a scoping report, and upon approval will prepare a draft and then final document.

Contact information: Infrastructure Planning and Geo-Resources Department

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Albuquerque, NM 87102

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